CONTINUING EDUCATION 
FOR ANIMAL PROGRAM PARTICIPANTS  
(RESEARCHERS AND CARE STAFF)

According to the 8th Edition of The Guide (required guidance for federally funded institutions):

‘All personnel involved with the care and use of animals must be adequately educated, trained, and/or qualified in basic principles of laboratory animal science to help ensure high-quality science and animal well-being.’

‘... the IACUC is responsible for providing oversight and for evaluating the effectiveness of the training program.’

‘All Program personnel training should be documented.’

‘The institution should provide opportunities and support for regular professional development and continuing education to ensure both that professional staff are knowledgeable about the latest practices and procedures and that laboratory animals receive high-quality care.’

In January 2014, the Duke IACUC approved the Duke Policy Continuation Education for Animal Researchers and Care Staff. This policy becomes effective 1 January 2015, after which time, three (3) Continuing Education Units (CEUs) will be required of all protocol participants every twelve (12) months. A CEU roughly equals three contact hours. With 2014 half over, it is timely to start looking forward and assure each member of your laboratory will meet the minimum expectations for continued animal use privileges.

The goal of all training is to assure an individual has satisfactory qualifications and effective skills for the procedures they are approved to perform. According to the NIH (& The Guide), a related goal is assuring currency in animal care & use activities. While acknowledging the ‘training overload’ we all experience, we must also recognize that research is dynamic and requires both initial and on-going training for assured & continued proficiency. As such, Duke uses a tiered approach for animal research and care staff training; initially providing core information and skills, and then supplementing the core training with Annual Refresher and Continuing Education.

REPORTING A WORK-RELATED ACCIDENT, INJURY, OR ILLNESS

When you work with animals it can be difficult to completely avoid an accident, injury, or illness. You are likely well aware of the process for reporting adverse unanticipated events when animals have accidents, injuries, or unexpected illnesses. But people can get hurt as well. For example, over the last 6 months there have been 14 reported animal-related injuries at Duke; 12 of them were animal bites. While it might be something obvious like an animal bite, an injury could also be something more insidious like development of allergies. Our goal is a safe working environment for all, and at all times.

The Duke Occupational and Environmental Safety Office (OESO) and Animal Program work to prevent or limit the number of animal related incidents that occur. We have preventative care programs and training focused on decreasing the number of animal related accidents, injuries, or illnesses, we look at trends and emphasize issues that occur more frequently. But data used for trending is dependent on the quality of the information reported in the Work-Related Accident, Injury, or Illness HR form. Whenever reporting an incident, please include:

◊ Species of animal(s)
◊ How this injury involved an animal
◊ General and specific location (building and room number)
◊ What action was performed when the injury occurred, if applicable.

Upcoming Dates & Deadlines

Deadlines are 5 PM on the date listed! No exceptions!

July 18 Amendment Meeting
July 24 New Protocol Meeting
July 28 Amendment Deadline
August 4 New Protocol Deadline
August 7 Amendment Meeting
August 11 Amendment Deadline
August 21 Amendment Meeting
For most program participants, you are likely already exceeding a minimal 3 CEUs annually in your routine educational activities. For others, it will likely be a matter of reading a few articles or newsletters each year, but for all of us the funding agencies have said clearly “it is a matter of doing training and documenting training.” Even so, the IACUC chooses to make ongoing training & documentation as pain-free as it can be.

Let’s begin by visiting the Duke animal program sub-web page Training for Researchers. This page provides greater detail on what is considered Continuing Education (CE). The same site provides access to all Animal Tracks newsletters (remember: the current issues provide 0.5 CEU per issue read) and a link to IACUC-endorsed articles that can be used for CE.

The second major issue with training is documentation of training performed. Neither the OAWA or IACUC will keep track of training, but may ask to see your training documentation during an IACUC Semiannual Inspection or a Compliance Liaison visit. Failing to have training for all protocol participants will be a programmatic non-compliance (yeah – not a good thing).

So, how does all of this play out?

Beginning in January 2015, when you take the ‘2015 Annual Refresher Training Module,’ the last slide will ask you to check a box and confirm that you have completed 3 CEUs of training over the last 12 months (January to December). When you check the box, you are confirming that you have documentation to show you have performed at least 3 CEUs of animal related training. Yes, it is an honesty approach.

For those staff who have not been at Duke for 12 months: Say new faculty come in July 2014, or your lab hosts summer students; what do they need to do? All new individuals complete Animal Handlers I, Animal Handlers II and Animal Handlers III (or animal Handlers IV if doing field studies) prior to obtaining access to animals. Completion of this mandated training meets the requirements for 3 CEUs for the individual joined the campus. This same rule also applies to short-term students or visiting research faculty. But, those who stay more than ‘one January’ must complete 3 CEU each year to continue animal use privileges.

What training activities quality as a ‘CEU?’ Any list would be incomplete, but a few example include:

⇒ Review of IACUC-selected Continuing Education Articles: Visit the Current Listing of CEU Articles to review animal use articles of interest. You receive 1.0 CEU for each article you read.
⇒ Attending a Duke Brown Bag Seminar: You receive 1.0 CEU for each BB Seminar you attend.
⇒ Reading the Current Edition(s) of the Institution’s E-Newsletter ’Animal Tracks’: You receive 0.5 CEU for each CURRENT YEAR issue you read.
⇒ Completion of AALAS Learning Library Modules: Usernames and passwords are provided to all members of the Duke animal research community by emailing w.wade@duke.edu. There is NO COST for Duke folks. Visit the Learning Library for a complete listing of available courses (https://www.aalaslearninglibrary.org/). You

2014-2015 RACC CLASS FULL

Thanks to everyone who submitted applications for the upcoming 2014-2015 Research Animal Coordinator Certification course.

All available seats are filled for the 2014-2015 RAC session.

Applications are being received for the 2015-2016 RAC class cycle.

Contact Bill Wade (w.wade@duke.edu) for more information regarding the RAC program.
The NCI Animal Production Program will discontinue the supply of animals to all customers as of September 12, 2014, in direct response to an external policy change which has affected NCI and this program. The strains/stocks that will no longer be supplied from NCI are listed below along with the commercial companies that provide similar strains/stocks and their contact information.

<table>
<thead>
<tr>
<th>Strain/Stock</th>
<th>Charles River Labs</th>
<th>Jackson Laboratory</th>
<th>Harlan</th>
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<tbody>
<tr>
<td>A/JCr</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>BALB/cAnNCr</td>
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<tr>
<td>C57BL/6NCr</td>
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<tr>
<td>C57BL/6-cBrd/cBrd/Cr</td>
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<td>C3H/HeNcr MTV-</td>
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<tr>
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<tr>
<td>SCID/Ncr (BALB/c background)</td>
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<tr>
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<td>Cr:SW (Swiss Webster)</td>
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<td>Cr:Nih(S) (NIH Swiss)</td>
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<td>X</td>
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<tr>
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<tr>
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<tr>
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<tr>
<td>B6-Ly5.2/Cr</td>
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<tr>
<td>Athymic NCr-nu/nu</td>
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Resource Contact Information
Charles River, 800-522-7287, www.criver.com
Taconic, 888-822-6642, www.taconic.com
Harlan, 800-793-7287, www.harlan.com
The Jackson Laboratory, 800-422-6423, www.jax.org

NCI realizes that some of these strains/stocks are unique to the NCI Animal Production Program. If your facility is interested in receiving breeding pairs from any of these strains/stocks to maintain your own breeding colony or if you have questions contact Linda Blumenauer at 301-846-1153 or blumenal@mail.nih.gov

Fume Hoods: The fume hood is often the primary control device for protecting laboratory workers when working with flammable and/or toxic chemicals. OSHA's Laboratory standard (29 CFR 1910.1450) requires that fume hoods be maintained and function properly when used. Review a copy of OSHA’s ‘Quick Facts’ for more information.

Bleach Incompatibility Warning: Dukes OESO has a nifty little one pager on what your really, really, REALLY should not mix with bleach …. Unless you are wanting to test your healthcare coverage through the veil of a green gas. See the Chemical Compatibility FAQ sheet for specific no-nos.

HAZARD ALERT: Phenol can be bad for good health! Several employees at Duke have experienced painful phenol burns from splashes of very small amounts of phenol (milliliter quantities). Splashing a larger amount on the skin could be fatal—in addition to causing burns, phenol absorbs rapidly through the skin and can affect the central nervous system, liver, and kidneys. A splash to the eyes could cause blindness. So, what's a person to do? Begin by reading the Hazard Alert- Phenol Burns Can Be Fatal to find ways of working with phenol safely.

Guidelines for Blood Withdrawal: How much wood could a woodchuck chuck, if a woodchuck could chuck wood? Now there’s a tongue twister! But the real question is how much blood can you get from a research animals? Not so much a tongue twister, but still a very good question many of us would get wrong! Visit the Guidelines page for reasonable approximations of blood withdrawals.

Potential Signs of Pain or Distress in Rodents & Rabbits: Unless your name is Dr. Doolittle, you are probably not real good at ‘talking with the animals.’ So, we must observe and infer what they are feeling and when they are in distress or pain. This chart give a really good list of things to watch for, and if you see these … your animal may be in discomfort—so Call DLAR!

P.S. Nature Methods has a set of photos to help us recognize the signs of pain in mice. Click the link for the full article titled Coding of facial expressions of pain in the laboratory mouse.
Please mark your calendars for your facility’s semiannual site visit date.

- AUG 7th: LSRC—Sands
- AUG 14th: GSRB2
- AUG 21st: Bryan—Nan Duke—VSH Cary
- SEP 4th: Annex—Jones—RP 1-4—GSRB1—Engineering
- SEP 11th: Marine Lab
- SEP 18th: Carl—Eye Center—DLAR Farm—Independence Park
- OCT 2nd: CCIF
- OCT 9th: Foster St.—Biology—French—CIEMAS
- OCT 16th: Duke North/South—GHRB
- OCT 30th: Vivarium—MSRB 1
- NOV 6th: Lemur Center—MSRB 2—Mesocosm

Site visits will start at 1:00 PM. Please make sure that a contact is available for your lab. If you have any questions about the site visit process, please contact Bill Wade at 668-6722 or w.wade@duke.edu

MouseBase@Duke is a user-populated online database of research mouse model strains used and maintained by Duke investigators. The primary aim of this database is to foster collaboration between research groups by identifying mouse strains present within Duke. Researchers are required to enter information about their mouse strains upon submission or renewal of their IACUC protocols.

MouseBase began about four months ago and in that time over 150 strains have been entered into the database. Already MouseBase has provided peer-to-peer access to strains not available elsewhere and researchers have been able to find ‘spare’ animals for their research without purchase new animals from distant sites. DLAR is now monitoring the messages to assist with these requests.

MouseBase provides a unique opportunity to share phenotypic characteristics of mouse strains, in the ‘description’ section. Some of this phenotypic information may found on the original vendor websites (eg www.jax.org), if applicable, but additional ‘nuggets of information’ are always helpful, especially for less well characterized strains. Information such as susceptibility to anesthetic related complications, behavioral problems, tumor susceptibility, biochemical abnormalities etc. are just a few examples.

The Mousebase URL is: http://mousebase.duke.edu.
EFFECTIVE & SAFE HEAT PROVISION FOR RESEARCH ANIMALS
(The Goldilocks Approach to Heat Care)

Editor Note: The use of a product name is for educational purposes and not an endorsement of any specific product.

Do you remember Goldilocks? That little girl in fairyland that kept searching for the ‘right’ temperature of porridge? Remember she was looking for porridge that was neither too hot nor too cold, but ‘just right.’ There are many times we may need to provide supplemental heat for our research animals and we don’t want them too hot nor too cold, but ‘just right.’

You may have an animal recovering from surgery and it may need a bit of warmth to wake up smoothly. Your newborn (or neonatal) animals are generally exothermic (they do not generate internal body heat) and may require a little help to stay warm and cozy. The cage sippier tube may have leaked and your animal’s cage has wet bedding which usually means wet animals and hypothermia (small animals have lots of skin surface and can lose heat, especially when wet, very quickly). A little bit of warmth will go a long way to help these animals stay warm and dry out quickly. But what is research associate Goldilocks to do? Well …

⇒ When Goldilocks leans against something that is too hot, she can move. But her restrained, sick, or anesthetized animals are unable to move away from an object that is too hot and may suffer burns. So, she should always keep 3 or more layers of toweling or cloth between any heat source and the animal; and she should only place 1/2 of a cage on the heating surface. That’s the ‘just right’ approach.

⇒ Even though her lab has a heat gun or two, Goldilocks should never ‘ever’ under any circumstance heat animals by using or heat guns … or hair dryers!

⇒ If using electric heating pads (e.g., K&H Pet Bed Warmers come in several sizes), they must be thermostatically controlled and should be used only on the ‘LOW’ setting … and double check to confirm the heat is actually low. Goldilocks should place her ungloved hand on the pad—if it is hot for her to hold on to for a long time, then it is too hot to place next to her animals! It should only be warm—remember, it should be ‘just right.’

⇒ In a pinch, Goldilocks might use a water bottle, but must assure that water used to fill a hot water bottle is no hotter than 40°C (104°F). She should always use a thermometer to be sure, especially if microwaving the water!

⇒ Maybe Goldilocks’ lab has a circulating ‘water blanket,’ but once again she must assure it does not get any hotter than 40°C (104°F). And if the animal will be on the blanket for longer than a few minutes, the temperature of the water should be no more than a couple degrees above the standard body temperature for the animal (e.g. a fancy water blanket may have a feedback control using a rectal temperature probe to assure the temperature stays ‘just right.’).

⇒ But Goldilock’s favorite method that she has used successfully for many years is to gently warm her animals using microwavable thermoplastic devices. Items such as SnuggleSafe®; MyWarmPet®; or K&H Pet Bed Warmer® provide a reliable and reproducible heat source for extended periods of time, in some cases up to 10 or 12 hours of heat. She preferred these devices to electric heating pads as they have no wires, are bite resistant, and safe when used according to the manufacturers instructions. They also don’t leak! The thermoplastic polymer in these devices generate steady heat at about 52°C (123°F) for extended periods as the polymer phase transitions from a liquid back to a solid.

And being a wise research associate, Goldilocks knows that when using her microwavable phase-transition heating device, there are few important considerations:

1. She assure microwave functions such as grilling or browning (if available on your microwave) are switched off.
2. She removes any metal trivets.
3. She makes sure your oven interior is clean.
4. She select full power and sets the timer according to the manufacturer chart.
5. When the time cycle has finished, she lets the device equilibrate for a couple minutes—it is likely to have ‘hot spots.’
6. After a few minutes waiting, she removes the device from the microwave … Very carefully! It will be hot.
7. She covers the device with 3 or more layers of toweling or place beneath 1/2 of the cage. Caution: It will still be hot! Use a mitt to handle it.
8. She NEVER, EVER places the heated device in direct contact with any animal! Burns may occur!
9. She NEVER, EVER reheats the device before it is completely cooled.

So, in good Goldilocks fashion, we know there are several methods to provide supplemental heat to our research animals and our overarching focus is to gently warm them, not toast them. So, keep it warm (not hot); keep it on a small area (give them a place to move to that is cooler); and keep checking to assure it isn’t too hot or too cold (at least every 15 minutes).

Wishing you a successful research month,
BIOMEDICAL RESEARCH WEBSITES

URL: http://www.nabr.org/Biomedical_Research/Benefits.aspx

URL: http://fbresearch.org/

URL: http://scaw.com/

URL: http://aalah.org/